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ABSTRACT

This study compared the perceptions held by Mexican-American secondary school students with those held by their Anglo-American peers toward the climate of their classrooms. The objectives of the study were to identify any differences in student perceptions and to examine the relationships between school climate perceptions, academic achievement, and attendance. The instrument for measuring climate perceptions required responses revealing attitudes toward: (1) teacher enthusiasm, authoritarianism, punitiveness, favoritism, warmth, and clarity; (2) instructional practices, class organization, and feedback; (3) student decision making, peer esteem, cliqueness, competitiveness, compliance, and apathy; (4) classroom dissonance and appearance; and (5) task difficulty. Teachers supplied information on student race, class attendance, and achievement. Findings indicated that the Mexican-American students generally had more positive perceptions of the classroom environment than did the Anglo-American students. Significant differences were found between the two groups on the climate dimensions of student cliqueness, teacher favoritism, and task difficulty. The Anglo-American students had higher perceptions of cliqueness and favoritism. The Mexican-American students scored highest on their perceptions of task difficulty, but reacted more favorably to student decision making, classroom dissonance, and classroom physical appearance than did the Anglo-American students. For the Mexican-American students the relationship between climate perceptions and class attendance and achievement was much stronger than for the Anglo-American students. Classes perceived to be characterized by teacher warmth and enthusiasm and an absence of authoritarianism and punitiveness were better attended by the Mexican-American students. These students also received higher grades in classes characterized by teacher clarity and good organization. This finding implies that efforts to improve attendance and achievement of Mexican-American students can focus on improving affective teacher behavior and teaching skills. (JD)

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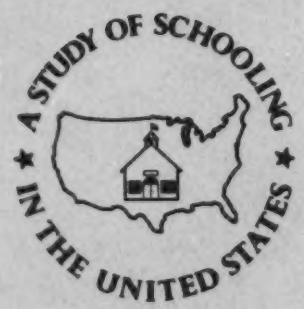
A STUDY OF SCHOOLING

Technical Report Series



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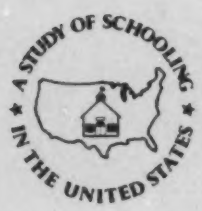

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MEXICAN-AMERICAN AND ANGLO-AMERICAN STUDENT PERCEPTIONS OF THE LEARNING ENVIRONMENT OF THE CLASSROOM

Gerald A. Engstrom

Technical Report No. 22

1981

A Study of Schooling is based upon the assumption that improving schools requires knowing what is happening in and around them. A comprehensive data-base of contextual information was obtained from students, teachers, administrators, parents and observers at all grade levels in thirty-eight elementary and secondary purposively sampled schools. *It is strongly recommended that readers of any technical report in this series first read Technical Report No. 1 which outlines the details, scope and limitations of the Study as a whole.*

It must be understood that this series of technical reports does not constitute the Study. Some reports are highly specific "molecular" inquiries while others take a more "molar" view across data sources, schooling levels, etc. Some reports are more methodological in nature arising out of issues in data analysis. Many of the reports quite naturally overlap in data analysed and interpretations rendered. Some authors have approached their task as consisting mostly of data description with little discussion beyond the presentation of the data. Others have ventured further into the realm of interpretation and speculation. *It must be further understood that data-based inferences can and do differ among researchers who come at the data from differing points-of-view.* Authors, therefore, are duly acknowledged for each report and are responsible for the material presented therein.

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In spite of receiving an impressive amount of attention, educational equality for ethnic and racial minorities remains an elusive goal. Certain minority students continue to do poorly in school compared to Anglo[1] students. This is particularly perplexing because other ethnic and racial minorities are able to go through school with no apparent penalty from their minority status. The Mexican-American minority[2], however, is one of the groups that continues to have serious problems in our schools--problems evidenced in significantly lower achievement and disproportionately large numbers of dropouts. In view of the disparity between the school success of Mexican-American and Anglo students, this study examined the two ethnic groups' perceptions of life in the classroom in an attempt to discover relationships that would help illuminate this disparity.

In recent years there has been a trend in educational research in general and in research concerning Mexican-American education in particular to studies that examine the affect of the context or environment on the participants in the process of schooling. Although little used in studying Mexican-American education, one of the most frequent methods of examining the context of schooling is through the use of self-report survey questionnaires generally known as climate instruments. The

assumption behind these instruments is that by collecting judgments from participants in a context, accurate assessments of environment can be obtained. This particular study used a climate instrument to compare Mexican-American and Anglo subgroup perceptions at the classroom level. These classroom climate perceptions were then compared to class attendance and course grades separately by ethnic subgroup.

Comparing ethnic subgroups in this way necessitated a sample of classes containing a fairly balanced number of Mexican-American and Anglo students. Fortunately, the impressive data set collected by the Research Division of the Institute for the Development of Educational Activities (I/D/E/A) was made available for the purposes of this study. These data were collected for the use of a Study of Schooling, a national research study under the direction of John I. Goodlad. Two secondary schools from these data were found that were well suited for the purposes of this study. The two schools were a high school and its feeder junior high located in a rural area adjacent to a fairly large city in the southwestern portion of the United States.

In the remainder of this chapter the relationship of this study to other studies of Mexican-American education and to other studies using the class climate construct will be discussed. The chapters that follow will discuss research literature that relates specifically to the approach taken by the study, specify the research objectives of the study, explain the methodology of the study, present the findings, and finally, summarize and discuss the findings and speculate on possible implications that they suggest.

The Mexican-American minority--the ethnic group whose educational problems constitute the focus of this study--is the second largest

minority group in the United States. In the Southwest it forms the largest minority—nearly one in five children in the public schools is Mexican-American (U.S. Commission, Report 6, 1974). Hernandez summarizes the status of these students by stating that as a group "Mexican-American students have achieved academically far below what is believed to be their capacity" (1970, p. 22). The five-year Mexican-American Education Study conducted by the United States Commission on Civil Rights—probably the largest study comparing the education of Mexican-Americans and Anglos—supports this assessment. A summary of some of the findings of this study will indicate the seriousness of the problems that members of this minority group encounter in school:

> Public school pupils of this ethnic group are severely isolated by school district and by schools within districts. (Report 1, p. 59)
>
> The Commission estimates that out of every 100 Mexican-American youngsters who enter first grade in the survey area, only 60 graduate from high school. . . . In contrast, 86 out of every 100 Anglos remain in school and receive high school diplomas. (Report 2, p. 42)
>
> Nearly half the Anglo students who begin school continue on to college, but only about one of every four Chicano . . . students do so. (Report 2, p. 42)
>
> A disproportionately large number of Chicanos . . . lack reading skills commensurate with age and grade level expectations. . . . For the total Southwest survey area the percentage of minority students deficient in reading reaches as high as 68 . . . percent in the 12th grade for Chicanos. . . . The severity of reading retardation also increases the longer the Chicano . . . youngsters remain in school. (Report 2, p. 42)
>
> Grade repetition rates for Mexican-Americans are significantly higher than for Anglos. (Report 2, p. 43)
>
> Mexican-Americans are underrepresented in extracurricular activities. (Report 2, p. 43)
>
> Schools of the Southwest are failing to involve Mexican-American children as active participants in the classroom

> to the same extent as Anglo children. On most measures of verbal interaction there are gross disparities in favor of Anglos. . . . The teachers respond positively to Anglos about 40 percent more than they do to Chicano students. Teachers also direct questions to Anglo students 21 percent more often than they direct them to Mexican-American. (Report 4, p. 43)

While not a complete list of the Commission's findings, this list outlines the magnitude of the problem. The Commission summarized these findings and wrote that they:

> Reflect more than inadequacies regarding the specific conditions and practices examined. They reflect a systematic failure of the educational process, which not only ignores the educational needs of Chicano students but also suppresses their culture and stifles their hopes and ambitions. In a very real sense, the Chicano is the excluded student. (Report 6, p. 67)

Of course there have been numerous attempts to understand how the situation described in these reports could have arisen. These attempts have approached the problem of Mexican-American education from at least three different perspectives. An early perspective, which still persists, explains the disparity between the achievement of Mexican-American and Anglo students in terms of the individual attributes of the Mexican-American students--these attributes being seen as evidence of the "culturally-deprived" background of the Mexican-American. This point of view surfaced in earlier studies of minority education that looked at the disparity between white and black achievement outcomes. The notion of "cultural deprivation" reflects the middle-class bias of the researchers. Assertions were made about the black students' lack of an educational "tradition" in the home, antagonism toward school, lack of motivation and poor self-esteem (Riessman, 1963). These students were also said to come from families that were deteriorating (Glazer & Moynihan, 1963). It is not surprising that when

educators began to examine the problems of the Mexican-American minority they would use the same notions that were being used to explain the relative failure of black students. Like blacks, the Mexican-Americans were seen, in the extreme, as "a child-like race without the generations of civilization and culture back of them which supports the people of the United States" (McEwen, 1914, quoted in Carter & Segura, 1980, p. 16). The contention that the black and Mexican-American children were not adequately equipped at home for their future school success led to the establishment of compensatory education programs designed to foster the acquisition of the characteristics deemed necessary for success in school. These characteristics would, of course, make the minority student more like the middle-class Anglo students to whom they were being compared. This notion of "cultural deprivation" places school failure on the shoulders of the individual child and makes the child the unit of change. It is not the school's but the student's fault that he is failing.

The implications of this explanation of school failure are obviously demeaning and derogatory. A more recent and alternate explanation of the differences in academic success between Mexican-Americans and Anglos does not consider minority group behavior as "deficient or deprived but rather as a logical and expected outgrowth of historical and structural constraints unique to specific populations" (LaBelle, 1976, p. 26). The work of Lesser and his associates is an example of this perspective. They gave reasoning, spacial and numerical tests to groups of Chinese, Black, Jewish and Puerto Rican children of various social classes. While controlling for social class, they found different patterns of abilities among the four groups--concluding that

cultural differences account for the different patterns of abilities (Lesser, Fifer & Clark, 1965). More recent work on differences in cognitive style also represents this perspective. Ramirez and Castaneda (1974), for example, compared Mexican-Americans and Anglos using the construct of field independence. They found significant differences between the two cultural groups--the Anglos being the more field independent.

Most researchers with the cultural difference perspective would propose that the schools change to accommodate different cultural backgrounds. Ramirez and Castaneda, for example, clearly blame the school for not adjusting to what they believe to be the more field-dependent cognitive style of the Mexican-American students. But, in spite of its more benign attitude toward the minority culture, in practice this perspective often can be criticized for the same reasons the cultural-deprivation viewpoint is criticized. First of all, by generally focusing on individual student characteristics and by enumerating ways that the cultural groups differ from one another, generalizations about the minority culture can arise that lead to stereotyping. The minority group can come to be seen as homogeneous in characteristics (for example, Mexican-Americans can all be considered field dependent). Secondly, as with the cultural deprivation perspective, the unit of change for the culturally different viewpoint generally ends up being the minority child. It may be argued from the culturally different point of view that although cultural traits may be desirable and appropriate within the subgroup, they are inadequate and inappropriate for success in school and within the dominant society leading to the same remedial approach to minority education (Carter & Segura, 1979).

A third perspective--Carter and Segura call it the structural environmentalist perspective--proposes that:

> Social, economic, cultural, political and school conditions are responsible for Mexican-American low school and social achievement . . . that much of the school curriculum and many school policies and practices inhibit learning and promote cultural conflict, emotional problems, and the eventual flight of children from the school . . . and that the school is at fault because of its inability to adjust realistically to service culturally-different groups. . . . The school, reflecting its parent society, is failing the Mexican-American. (1979, p. 124)

The earlier summary of the United States Commission on Civil Rights calling the Mexican-American the excluded student reflects this perspective (Report 6).

Further empirical evidence supporting this point of view can be found in the work of Cole and his associates (Cole & Bruner, 1971; Cole, Glick & Sharp, 1971) with the Kpelle people of Liberia. These researchers found that by manipulating the context of experimental conditions they were able to change the subjects' ability to complete the experimental task. Based on this work they concluded that:

> Cultural differences reside more in differences in the situations to which different cultural groups apply their skills than to differences in the skills possessed by the groups in question. . . . From this point of view, cultural <u>deprivation</u> represents a special case of cultural <u>difference</u> that arises when an individual is faced with demands to perform in a manner inconsistent with his past (cultural) experience. In the present social context of the United States, the greater power of the middle-class has rendered differences into deficits because middle-class behavior is the yardstick to success. (Cole & Bruner, 1971, p. 874)

The most formal expression of this point of view as it is applied to Mexican-American education is the so-called "theory of incompatibilities" developed by Cardenas and Cardenas (1972). The basic tenet of this theory is that "an instructional program developed for a white,

Anglo-Saxon, English-speaking, middle-class school population cannot be and is not adequate for a non-white, non-Anglo-Saxon, non-English-speaking, or non-middle-class population" (Cardenas, 1974, p. 8). Thus, the failure of minority students in school is seen as the result of the incompatibility between the minority students' cultural background and a school system reflecting only the middle-class, Anglo-Saxon culture. To rectify the problems facing the minority child, from this point of view, the nature of the incompatibilities must be identified and then they must be eliminated. Cardenas has grouped the incompatibilities he identifies between the Mexican-American student and the school system into five categories: poverty, culture, language, mobility and societal perceptions (1974). Once identified, it becomes the responsibility of the school system to eliminate the points of incompatibility. So, for those ascribing to this "theory" and for others taking the structural environmentalist position, the unit of change is the school and the school system.

While the source of the problems facing Mexican-American students can be seen from at least these three perspectives, the bulk of the attention and research has grown from the first two--the cultural-deprivation and cultural-different perspectives. These studies have generally focused on the individual characteristics of the minority student or the characteristics of the student's family. Examples of variables investigated in these studies are: self-concept, motivation, economic status, language interference, value orientation, locus of control, cognitive style and attitude (see Hernandez, 1973, for a good but somewhat dated review of this literature). Yet, in spite of the numerous variables examined, there is little conclusive evidence

concerning the causes of the lower school achievement of this minority group. The results of these studies have been, by and large, inconclusive and often contradictory.

There have been far fewer studies undertaken from the structural environmentalist position. Even though there is ample evidence from student outcome measures, and even though there have been numerous assertions that the regular classroom program has not worked for Mexican-Americans (for example, Ulibarri, 1974, Civil Rights Report 6, 1974; and Carter & Segura, 1979), school and classroom programs have not been a frequent center of attention. As Ramirez points out "rarely . . . does one find educators turning their glances inward and assessing the effects their own educational conditions, practices and policies are having on the child" (1974, p. 68). Since most of the studies have looked at characteristics of the minority student and since these studies have been inconclusive, Rameriz goes on to suggest that we "stop dissecting students and start taking a closer look at the schools as they respond, or fail to respond to minority groups" (1974, p. 68). In fact, in recent years there has been a move to studies looking at the impact of the school on the Mexican-American student. The series of studies completed by the United States Commission on Civil Rights (Mexican-American Education Study, Reports 1 through 6, 1971 to 1974) is a notable example.

Studies of education in general have been in the process of change in recent years--focusing more on the educational context or process. This trend predates and is parallel to the move to the structural environmental perspective seen in studies of Mexican-American education. Within this changing point of view a frequently

used means of discovering group or organizational difference has been through the examination of group or organization environments. In fact, it has been observed that "the focus of interest in educational measurement is beginning to shift from measures of the individual to measures of the environment" (Randhawa & Fu, 1973, p. 303).

In practice the growing use of environmental measures has led to increased attention being paid to both the educational context and the perceptions of those taking part in the process. The use of this new perspective has been hastened, in part, by the inability of traditional outcome measures to show significant differences in educational programs that are felt to be quite different (Walberg, 1971).

The most common method of measuring the environment or context has been through climate instruments. Research using climate measures in the classroom have found them to be sensitive to differences in such variables as grade level (Yamamoto, Thomas and Karns, 1969; and Walberg, House and Steele, 1973), subject matter (Yamamoto, Thomas and Karns, 1969; Anderson, 1971; Anderson, Walberg and Welch, 1969; and Lawrenz, 1976), sex (Anderson, 1970; Walberg, Sorenson and Fischback, 1972), class size (Walberg, 1972) and socio-economic status (Walberg, Sorenson and Fischbach, 1972). They have also been used to predict cognitive and affective learning (Walberg, 1968, 1969b; Walberg and Anderson, 1972). And Lawrenz has shown class climate to be stable over time (1977).

In view of climate instruments' sensitivity to numerous classroom variables and their focus on the class context, they seem to be an especially promising method of comparing Mexican-American and Anglo views of their classroom experience. Previous research has found that climate measures are "extremely sensitive in tapping

differences among groups" (Anderson & Walberg, 1974, p. 162). And, using a measure of class climate would abandon the individual as the unit of analysis in measurement and as the unit of explanation for existing differences. Thus, the focus would be on group perceptions of school programs--testing empirically whether or not the groups view their school or classes differently. Both the cultural difference and structural environmentalist perspectives operate on the assumption that the school is an uncomfortable and alien world for the minority student. However, with the exception of the Mexican-Americans' higher dropout rate and lower school achievement scores--outcomes that do not directly address the question of the minority group's adjustment to school--there is little empirical evidence to indicate that the Mexican-American students see the school environment as being any more hostile than do the Anglo students.

Some might argue against using participant perceptions as a basis for comparing the school experience of these two groups--asserting that these perceptions would reflect the participants' feelings rather than what actually takes place in the school environment. However, this misgiving does not seem important when faced with the point Thomas made long ago that "if men define situations as real, they are real in their consequences" (1928, p. 527). Especially for the minority student, it may be that the way he perceives his learning experience is more important to his success in school than what is "objectively" taking place. Certainly, the importance of what the student perceives is illustrated by Walberg's observation that what the student takes in makes the difference in learning (1976).

Therefore, it seems eminently reasonable to use measures of student perceptions of their classroom climate to compare Mexican-American and Anglo-American students, and that was the intention of this study. The study compares Mexican-American and Anglo perceptions of their classroom experiences using a self-report classroom climate measure. It was expected that the two groups would differ in their perceptions. And in view of the differences in educational outcomes between the groups and in view of the differential treatment that the structural environmentalist perspective posits the groups receiving, it was expected that the Mexican-American perceptions would be significantly more negative.

FOOTNOTES

1. The term Anglo refers to all white persons who are not Mexican-American or members of other Hispanic groups.

2. The term Mexican-American refers to all persons of Hispanic descent who trace their lineage to Mexico or to Spanish or Mexican-American territory that is now part of the Southwestern United States.

CHAPTER II

A REVIEW OF THE LITERATURE: DIFFERENTIAL TREATMENT AND PERCEPTION

This section, which reviews literature related to the study is not intended to be a comprehensive review of research comparing Mexican-Americans and Anglos in school. Literature comparing the two groups is now quite vast (for an indication of the scope of this literature, see Hernandez's 1973 review), but most of the studies are unrelated to the perspective of the present study. This is the case because the bulk of the literature examines individual--and generally psychological--characteristics of the Mexican-American student. These studies have been disappointing in their inability to isolate variables within the Mexican-American minority which account for the variance in school outcomes.

The study that follows, guided by the structural environmentalist perspective, focuses on the possibility of discovering significant variance in Mexican-American school outcomes attributable to school or classroom variables. Specifically, the Mexican-American and Anglo perceptions of the classroom context will be compared to see if the groups differ in their view of the classroom experience.

Early examinations of Mexican-American perceptions of the school or class were interested in these perceptions to help describe the attitude of the minority student but not to describe the context of

schooling. Attitudes toward the class were only another of the general attitudes toward education. The frequently referred to study of Mexican-American and Anglo attitudes conducted by Demos (1962), for example, asked for the respondents' perceptions of such school-centered variables as the following: Presence of teacher understanding, staff's concern about students, freedom to disagree with teachers, and teacher discrimination. But, these items were a part of a larger series of items--items like: Desirability of parental pressure for education, value of a college education, and desirability of gang--that were intended to measure the students' attitudes toward school. Demos concluded that the minority students have a significantly less favorable attitude toward education than the Anglo students. But, with certain crucial variables controlled for, only one variable that could be considered representative of the school or class context displayed a significant group difference - Staff's concern about students. The two groups' attitudes toward education differed, but there was little group difference reflecting differing perceptions of the school.

Within recent years, research has begun to look at the educational structure or environment to determine whether Mexican-Americans and Anglos receive differential treatment in the schools. This has been part of the general trend in educational research alluded to earlier--the trend toward studies of context as an influence on behavior. Most of this work that investigates the environment or context has been based on one of two theoretical models: Murray's Need-Press Model (Murray, 1938) or Getzels and Thelen's Classroom as a Social System Model (Getzels & Thelen, 1960). Murray's model formalizes Lewins

view that behavior is an outcome of the relationship between the person and his environment. Needs and Press are seen as describing the relationship between the person's psychological needs and the environment's complimentary press. The press of an environment gives it its own particular climate which can facilitate or impede the needs of those functioning within the environment. The Social System Model, in contrast, sees climate developing from a leader's (in the case of a classroom, a teacher's) style of dealing with others in the system. Either model assumes as Insel and Moos point out that "like people, environments have unique personalities. Just as it is possible to characterize a person's 'personality', environments can be similarly portrayed with a great deal of accuracy and detail" (1974, p. 179). In either case, the personality or climate of an environment is considered a characteristic that can be influenced by and can influence the participants in a particular setting.

The two most frequently used methods of measuring the context or climate of a specific setting have been observational systems and questionnaire surveys. Both methods have seen a great deal of use in recent years. Several studies of both types have been used to investigate the possibility that the context of schooling differs for Mexican-American and Anglo subgroups within the school or class. The most impressive of the studies using classroom observation was conducted as part of the United States Commission on Civil Rights' Mexican-American Education Study. (The results of this portion of the study can be found in Report 5, and in Jackson & Cosca, 1974). For this study, 52 schools were randomly sampled from a total of

430 eligible schools. Within the 52 schools, classes were sampled from the 4th, 8th, 10th and 12th grades. Complete data were collected from 429 classrooms' collected through the use of the Flanders Interaction System. While the observers visited the classes for 45 minutes, coding took place for only 10 minutes - 10 minutes open to the discretion of the observer. The representativeness of the 10 minutes is open to question, but the authors feel that the large number of classrooms makes the results representative. In any case, the observers were specifically investigating the differences in teacher behavior toward minority and majority group children. As Jackson and Cosca report:

> of the twelve measures of interaction showed substantial and statistically significant differences between Chicano and Anglo students. These differences were for teacher praise or encouragement of students, teacher acceptance or use of students' ideas, teacher questioning, the teacher' giving of positive feedback, all non-criticizing-teacher talk, and all student speaking. (1974, p. 224)

In each case the findings demonstrated that the teachers were favoring the Anglo students.

Interestingly, the variables showing significant group differences are among those that are fairly consistently related to student outcome measures in literature examining teaching behaviors and student achievement, and classroom interaction. Rosenshine has reviewed much of this work and while consensus is rare, there is consistency over many studies in finding that forms of teacher praise, acceptance and use of student ideas, and questioning are related to student achievement (1971, 1976). Reacting to this research, Jackson and Cosca conclude:

> This study found large and significant disparities in all three of these behaviors. Teachers praised or encouraged

> Anglos 35% more than they did Chicanos, accepted or used Anglo's ideas 40% more than they did those of Chicanos, and directed 21% more questions to Anglos than Chicanos. Thus, Chicanos in the Southwest receive substantially less of those types of teacher behavior presently known to be most strongly related to gains in student achievement. (1974, p. 227)

A final important point concerning this between group disparity is that most previous research discovering the relationship between teacher behaviors and student outcomes has looked at these variables between classes. Class means have been compared. The Civil Rights Study, in contrast, "investigated disparities in teacher behaviors between groups of students within the same classroom. Because disparities within the classrooms are more visible to students than disparities among classrooms, they probably have more impact on students' motivation and achievement" (Jackson & Cosca, 1974, p. 227).

While most important in terms of size, the Civil Rights Study is not the only one to have used observation techniques to examine classroom level differences between Mexican-American and Anglo students. Laosa (1977) used classroom observation to focus on teacher interaction with these two groups of students in bilingual kindergarten and second grade classes (8 classes and 6 classes, respectively). In addition to ethnicity he also examined the question of language dominance. In spite of these classes being bilingual he found "that both the ethnicity and the language dominance of students had a significant effect on classroom interaction" (p. 59). This was true particularly for teachers' disapproving behavior toward the students and the amount of nonevaluative, academic, or academically related information received by the students. In kindergarten the Mexican-American

students received more academically-related information and the smaller amount of teacher disapproval, but by the second grade (cross-sectional) the pattern had reversed (language dominance seemed to account for the reversal in teacher disapproval). Here again teacher interactions toward within-class subgroups differ.

A third study (Gumbiner, Kagan & Knight, 1979) used observation in relation to Mexican-American and Anglo subgroups. In this case, however, the observational instrument was not coded for the two groups. Comparisons between the groups were made later by relating the observation data to instruments administered to the students--instruments that measured social orientation, self-esteem, and classroom climate. The results of this study are somewhat suspect because of a relatively small sample size and because the variables used for determining the relationships were collapsed across categories in violation of the assumption of independence. Nonetheless, the authors concluded that classroom structure and teacher behaviors affect members of the two ethnic groups differently.

In reference to classroom interaction studies, it should also be pointed out that studies making comparisons between black and white subgroups have also found differences favoring the white subgroup. (see, for example, Byers & Byers, 1972; Rubovits & Maehr, 1973).

The second method for measuring the context of a setting--questionnaire surveys--uses participant perceptions to describe the climate. Perceptual data might be thought to be less valid than data collected by trained observers since the perceptual data is less objective. But, even though it is true that assessment of climate

obtained from the perceptions of participants relies on subjective judgments, it has also been shown to relate much more strongly to both affective and cognitive class outcomes. In fact, in a review of several studies relating class climate to learning outcomes, Anderson and Walberg (1974) offer evidence that climate is a more powerful predictor of learning than is IQ when pre-test scores are used to control for the affect of pre-class knowledge of the subject.

They reason that participant perceptions prove valid and capable of predicting student learning because:

> The student is the intended recipient of instruction and other cues in the classroom, particularly social stimuli; and he may be the best judge of the learning context. Compared with a short-term observer, he weighs in his judgement not only the class as it presently is, but how it has been since the beginning of the year. He is able to compare from the child-client point of view his class with those in past grades or perhaps with others he is presently taking or even of other small groups of which he is a member. He and his classmates form a group of 20 or 30 sensitive, well-informed judges of the class; an outside observer is a single judge who has far less data and, though highly trained and systematic, may be insensitive to what is important in a particular class. (Anderson & Walberg, 1974, pp. 155-156)

Walberg (1976) would go as far as to suggest that since we selectively perceive our own and others' behavior and we function on the basis of these selective perceptions, "what is objectively counted or measured should be weighed and justified by what is subjectively perceived, insofar as individual learning is concerned" (p. 156).

Thus, faced with the disparity between Mexican-American and Anglo school outcome scores and with the evidence from observational studies demonstrating that the two groups receive differential treatment in the school and class, there appears to be a compelling need for studies

contrasting the two groups' perceptions of their school experience. It seems important to know how the recipients of this differential treatment react to it.

There have been, in fact, a few studies that have taken this approach. Four of these studies (Garza & Nelson, 1973; Garza & Widlak, 1976; Murray & Pettibone, 1972; Vela, 1977) were quite similar. They all were conducted using university students as respondents. They focused on the same level of schooling--post-secondary. They also all used the same climate instrument to collect their data--the College and University Environment Scales (CUES) created by Pace (Pace, 1969). As the name implies, this instrument is intended to measure the nature of college and university environments. It does so along seven environmental dimensions.

Each of the four studies found significant differences between Mexican-American and Anglo students on at least one of the seven scales. Three of the four found significant differences on the Scholarship Scale--a scale measuring the degree to which the environment is characterized by intellectuality and scholastic discipline. But, in one study (Murray & Pettibone, 1972) the Anglos scored higher on this scale and in the other two (Garza & Nelson, 1973; Garza & Widlak, 1976) the Mexican-Americans had higher scores. The study by Garza and Nelson also found the Mexican-Americans scoring higher on the Propriety Scale--indicating perceptions of greater politeness and mannerliness. And, in the Garza and Widlak study the Mexican-Americans scored higher on the Community Scale--indicating perceptions of a friendly, cohesive campus.

The last of the four studies (Vela, 1977) resulted in only one scale showing significant group differences. The Mexican-Americans had higher scores on the Practicality Scale. This scale measures organization and material benefits.

To summarize the findings of these four studies, the CUES is intended to measure differences among environments and one should not expect complete consistency from studies performed in different locations. What is interesting is that in three of the four studies the Mexican-American students had more favorable perceptions of the climate than did the Anglos. More importantly, no doubt, there were relatively few differences between the two groups based on the CUES scores. Two studies found two of the seven scales with significant differences and two of the studies found only one of seven significant While these studies seem to offer little evidence of perceptual differences between the groups, the studies were completed at a level of schooling where the group differences are probably smallest. Unlike earlier years, attendance at the university is voluntary. It is also limited to those who did well enough in secondary school to gain entrance into the university. One would expect a substantially different student population at the university than at the pre-collegiate levels based on both of these differences.

Two studies (Gumbiner, Kagan & Knight, 1979; Sheehan, 1978) were made comparing Mexican-American and Anglo perceptions' of class climate at the pre-collegiate level. Both were at elementary schools. The Gumbiner, et al. study was referred to earlier during the discussion of studies collecting observation data. This study used both

observational and perceptual methods of data collection. Unfortunately, both portions of the study have the same limitations--the limitations of a small sample size and analyses completed with separate cells that are not independent. For the climate portion of the study, 15 third through fifth grade classes were sampled. Overall, there were 77 Anglo children (61%) and 30 Mexican-American children (39%). The number of children were further reduced by sampling approximately one-third of the students in each class to respond to the climate questionnaire. (My Class Inventory, Anderson, 1971, was used to collect the climate data.) Class means on the five climate scales were then computed separately for the Mexican-American and Anglo students. An ethnicity by age by sex analysis of variance resulted in no main or interaction effects for ethnicity. These results must be accepted with hesitancy, however, in view of the limitations of the study that have already been alluded to.

Sheehan's (1978) study used fifth grade classes for the sample and employed the same climate instrument that Gumbiner, et al. used. His sample consisted of 84 language arts classes from a large southwestern city. The ethnic breakdown of the students was 711 (45.3 percent) Anglo, 595 (37.9 percent) black and only 244 (15.6 percent) Mexican-American. He first related desegregation status, teacher attitude, teacher characteristic, and classroom characteristic variables separately to the climate scores of the three ethnic groups using canonical correlation procedures. These analyses demonstrated differences in the relationships between these variables for the three ethnic groups. For example, teacher educational characteristics (teaching experience, highest degree, and hours of graduate study

beyond bachelor's degree) and the proportion of the class that was female were the variables predicting the Anglo class climate scores. For the Mexican-American sample the teacher attitude variables (traditionalistic beliefs about child control, students' independence in learning, and lack of rigidity and severity in handling children) were the ones predicting class climate scores.

Sheehan next pooled the black and Mexican-American climate scores and computed a multivariate analysis of covariance to test for a main effect of ethnicity on the climate scores. He found that "compared to the minority subgroup, the Anglo subgroup perceived the language arts classes as having less cohesiveness and more friction" (p. 353). Here again the minority students have the more positive perceptions of the environment.

Judging from these studies that have used Mexican-American and Anglo perceptions of the educational environment, the question of the extent and direction of differences between the two groups is not entirely clear. Certainly the structural environmentalist position outlined in chapter one would predict greater group differences and would predict no ambiguity in the direction of these differences. The results of the empirical studies using classroom observation to compare the two groups would also lead one to expect greater group differences in participant perceptions with the Anglo group being expected to have the most favorable perceptions.

Perhaps the nature of the perceptual studies prevents them from displaying more subgroup differences. Possible reasons for the studies (Garza & Nelson, 1973; Garza & Widlak, 1976; Murray & Pettibone, 1972;

Vela, 1977) conducted at the university level failing to show large subgroup differences have already been discussed, as have the limitations of the Gumbiner, et al. study. Sheehan's study used a larger number of respondents and more sophisticated analytic techniques than the other studies of subgroup perceptions, but while he used class means to compare the groups he averaged these means across all classes separately for the subgroups. This may have lessened the effect of subgroup differences compared to the results he might have obtained had he made a class by class comparison of subgroups within class. And, for the main effect by ethnicity analysis he conducted, he combined the black and Mexican-American groups. Since the Mexican-American group constituted only 15.6 percent of the sample, this analysis did not constitute a valid test of the differences between Anglo and Mexican-American perceptions of class climate.

To summarize, there has been somewhat of a shift in research on Mexican-American education to studies examining educational settings This change is consistent with a shift to the same perspective for educational research in general. The major methodological approaches taken in these studies have been observational systems and questionnaire surveys. While both methodologies have proven to be useful in finding differences between settings, the latter methodology generally has been more sensitive to group differences. The questionnaire survey methodology has certainly been found to have more predictive validity. Questionnaires focusing on settings consistently predict affective and behavioral outcomes.

Both methodologies have been used to make comparisons between settings wherein Mexican-American and Anglo students are educated. But, to this date there have been few of these studies. Of the studies that have been made, those using observational technique to examine whether or not Mexican-Americans and Anglos are subject to identical experiences within a given classroom offer compelling evidence that they are not. Based on these few studies, observers see significant differences in the classroom interactions the two subgroups experience—differences that favor the Anglo students.

However, surveys questioning members of these subgroups about their experience in classroom settings have been less convincing. Of the few studies that have been made, most have found differences in subgroup perceptions of the environment. But more often than not, it has been the Anglo students who have had the least favorable perceptions. Shortcomings in the level of education examined or the procedures used to examine subgroup differences appear to leave the existence of Mexican-American and Anglo differences in their perception of the classroom environment open to question.

CHAPTER III

RESEARCH OBJECTIVES

Theoretically generated expectations and empirically generated evidence of differential Mexican-American and Anglo experience within the classroom environment and the insufficient comparative examination of the ethnic groups' perception of this environment call for further investigation into the nature of Mexican-American and Anglo perceptions of class climate. Therefore, it was the first objective of this study to explore the following:

> Do Mexican-American and Anglo students differ significantly in their perceptions of the classroom climate?
>
> If the groups differ significantly are the perceptions of the Mexican-Americans least favorable as would be predicted on the basis of theory and observational studies?

In addition to the possibility of uncovering an overall difference in perceptions of the environment, class climate measures are also multidimensional and offer the possibility of exploring what kinds of constructs display the greatest subgroup difference. In view of this possibility the final part of the first objective of this study was to explore the following:

> If significant overall ethnic subgroup differences in climate perception are found, what categories of climate constructs account for these differences?

As noted earlier, in addition to being sensitive to group differences, class climate scores have been found to predict class outcomes

(Anderson & Walberg, 1974), and final grades given by the teacher (Moos & Moos, 1978). They have also been found to relate to student absenteeism (Moos & Moos, 1978). The relatively poor performance of Mexican-American students as compared to Anglo students has been discussed earlier in this study. Therefore, in view of the sensitivity of climate measures to class outcomes and in view of the documented disparity between Mexican-American and Anglo students in general, it was the second objective of this study to examine the following:

> Do the climate scores of the Mexican-American and the Anglo subgroups relate to class achievement and attendance?
>
> If there is a relationship between climate scores and achievement and attendance is it of equal importance for each of the two subgroups?

Again, in order to take advantage of the multidimensionality of the climate instrument, the final part of the second objective was to explore the following:

> If significant overall relationships are found between climate perceptions and achievement and/or attendance, what categories of climate constructs account for these relationships?

Pursuing these objectives seemed a reasonable way of determining the degree and nature of the difference between Mexican-American and Anglo perceptions of their classroom experience and of examining the relationship between these perceptions and class achievement and attendance.

Climate scores have been shown to relate to numerous class level variables in addition to class outcomes. Among the most important of these are sex (Anderson, 1970; Walberg, Sorenson & Fishbach, 1972), subject matter (Anderson, 1970; Anderson, Walberg & Welch, 1969; Hearn & Moos, 1978; Lawrenz, 1976), socio-economic status (Walberg, Sorenson

Fischbach, 1972), and grade level (Walberg, House & Steele, 1973; Yamamoto, Thomas & Karns, 1969). In order to validly test the objectives outlined for this study, it was necessary, insofar as possible, to control for the effect of these variables.

It is recognized, of course, that since the data used to examine these objectives came from only two schools (one junior high and one high school) within the same district that the results of the study will not be generalizable to other schools. However, it is hoped that the findings of this study will have heuristic relevance for the schooling of Mexican-American students and will suggest hypotheses for more in-depth and larger scale studies.

CHAPTER IV

THE METHODOLOGY

The practical limits of time, money and access to respondents would have made collecting data from a sufficiently large sample for this study very difficult for a single researcher. Fortunately, the impressive data set collected under the auspices of the Institute for Development of Educational Activities, the education arm of the Charles F. Kettering Foundation, was made available for the purposes of this study. These data were collected for the use of a national research study entitled A Study of Schooling which was under the direction of John I. Goodlad.[1] These data proved to be well suited for a secondary analysis examining the objectives already specified.

The Sample and Data Collected

The Study of Schooling is a comprehensive descriptive study of the context of schooling in 38 schools--schools carefully chosen on such factors as school size, economic level, racial/ethnic mix of students, and location (urban, suburban and rural). The schools were selected by "triples". A triple consisted of a senior high school, a feeder junior high or middle school, and a feeder elementary school. The data for the study were collected at these schools during Spring and Fall, 1977. All together 8,624 parents, 1,350 teachers and 17,163 students from these schools participated in this study. At the schools, eight subject areas were sampled: mathematics, English/

language arts, natural sciences, social sciences, career education, the arts, foreign language and physical education.

For each of the sampled schools, on-site project personnel used questionnaire, interview and observation methodologies for data collection. The classroom sampling plan called for 48 senior high and 36 junior high classes to be sampled. They were selected to be representative of the courses offered. At the elementary schools, two classrooms at each grade level were randomly selected. Questionnaires were administered to all of the students in each of the sampled classrooms.[2]

For the purposes of this study, it was necessary to locate classes containing both Mexican-American and Anglo students. While members of both groups could be found in a number of the schools, only two secondary schools had a near enough balance between Mexican-Americans and Anglos that the sampled classes could be used for an ethnic subgroup comparison. The two schools are the junior high and senior high of a district situated in a rural area adjacent to a fairly large city in the southwestern portion of the United States. For purposes of this study the schools will be fictitiously called Fairfield Junior High and Fairfield Senior High. At Fairfield High the ethnic composition of the sampled classes was 42 percent Mexican-American and 53 percent Anglo. At the junior high it was 50 percent Mexican-American and 46 percent Anglo. (There were approximately 4 percent black students at both of these schools, but they are not included in the analyses that follow.) There were 696 students sampled at the high school and 462 at the junior high. The socio-economic status of the families sending children to these schools was, on the average, middle to low.

Since the purpose of this study was to compare subgroup perceptions of class climate it was necessary to identify the classrooms at each of the two schools that contained a reasonable balance of Mexican-American and Anglo students. To assure a reasonable balance, it was decided to eliminate from the study all classes that did not contain at least five students from each of the two subgroups. This decision reduced the number of sampled classes available for subgroup comparison from 46 to 21 at the high school and from 30 to 17 at the junior high school. The number of subject areas which could be included in the study was also reduced by requiring at least 5 students from each subgroup in a class. The following subject areas were eliminated: foreign languages, vocational education, and physical education. The number of classes meeting the stated criterion at each school and for each of the remaining subject areas can be found in Table 1.

TABLE 1. Valid Classes at Each School for the Five Subject Areas

	Subject Area					
District	Eng	Math	Social Studies	Science	Art	TOTAL
Fairfield High	5	5	4	3	4	21
Junior	2	5	3	4	3	17
TOTAL	7	10	7	7	7	38

Although reducing the number of classes to be analyzed from 76 to 38 seems like a considerable loss, many of the classes that were eliminated were so imbalanced that they could not have been used even if the criterion for selection had been less stringent. The bulk of

the classes (21) that were eliminated were vocational education classes that were very small and were not ethnically balanced. A final reason for requiring students from each group in all of the classes was that for this study, climate was conceptualized as a characteristic of the environment and it was felt that five respondents from each group would eliminate class climate scores that were idiosyncratic to one or two individuals.

It is important to note, since this study uses Mexican-American respondents, that a Spanish language version of the climate instrument was available for those students preferring to use it. However, none of the students at Fairfield Junior and Senior High requested the Spanish version.

Instrumentation

The class climate questionnaire developed by A Study of Schooling was used to collect the student perceptions that were used in this study. This instrument grew from two separate interests that emerged early in the study's conceptualization--interest in the classroom affective environment and in the social system of the classroom. In the early stages of conceptualization and pilot testing these two interests were pursued separately. However, after completing a major pilot study in preparation for final data collection, the affective and social systems portions of the instruments were found to have substantial overlap. The two "substudies" were then merged conceptually and the separate instruments were modified and combined into a single instrument. This revised instrument also included a number of new constructs that were added after a review of existing climate literature.

At this stage the separate items were given careful attention and many were reworded to make the reading level appropriate for both junior high and high school students. This process of conceptualization, pilot testing and revision resulted in a final instrument containing 113 items organized in 29 a priori dimensions.

After data collection for A Study of Schooling was completed, the 113 class climate items subsequently were analyzed in several different ways. Factor analyses were computed first using orthogonal rotation and later using oblique rotation. Since the dimensions were never thought to be entirely uncorrelated, the oblique solution, as would be expected, turned out to be the most elucidating. They were used as a guide for interpreting the final dimensions along with cluster analysis results. These analyses resulted in a form of the instrument containing 90 items and 18 dimensions. (A more detailed description of the process involved in deriving this form of the instrument can be found in Sirotnik, Nides & Engstrom, 1980.) Internal consistencies (as measured by the alpha coefficients) were computed for the 18 dimensions. Those computed at the between level of analysis (the level of analysis used in this study) range from .76 to .96 with a mean of .87.

The 18-dimension form of the instrument then was subjected to additional analysis. Factor and cluster analyses were used as part of a second order analysis of the climate dimensions. The second order analysis was done in recognition of the intercorrelation between scales. With these analyses an attempt was made to balance a desire to combine the climate scales with high intercorrelations and at the same time to

maintain as many scales as possible as conceptually unique. These analyses were computed using the entire secondary school sample (classes = 895) from A Study of Schooling. Since this study used the between-classes approach, the between-classes second order analyses were the most appropriate. The results of the between second order analyses suggested the combination of several of the climate dimensions into two new dimensions--Teacher Affect and Instructional Practices. The new Teacher Affect scale combined the Teacher Concern, Teacher Enthusiasm, Teacher Authoritarianism, and Teacher Punitiveness scales. The new Instructional Practices scale combined the Teacher Clarity, Knowledge of Results and Organization scales. The Student Satisfaction scale was found to have relatively high correlations with a large number of scales; therefore, it was eliminated from this version of the instrument. The other dimensions were found to be sufficiently distinct to justify using them separately. Thus, the second order analyses resulted in a version of the climate instrument containing 86 items and 12 dimensions. This form of the instrument was used for comparing the perceptions of the Mexican-American and Anglo subsamples. (A more detailed description of the process involved in deriving the 18-dimension version of the instrument and of the process involved in conducting the second order analyses can be found in Sirotnik, Nides & Engstrom, 1980.)

Data for the other variables used in this study were collected by using a pupil description sheet. Teachers in each of the sample classes completed these sheets--supplying information about student race/ethnicity, class attendance and class achievements.

Description of Variables

The variables that were required to fulfill the research objectives of this study were operationally defined and measured as follows:

Independent Variable--Ethnicity

The teachers in each sampled class were asked to identify the race/ethnicity of each student along the following seven categories: White/Caucasion/Anglo, Black/Negro/Afro-American, Oriental/Asian American, Mexican American/Mexican/Chicano, Puerto Rican/Cuban, American Indian, Other. For each of the classes that were valid for this study, data from students identified as either White/Caucasion/Anglo or Mexican American/Mexican/Chicano were used. All students identified as belonging to other racial/ethnic groups were eliminated from the study.

Climate Dimensions--Independent/Dependent Variable

Depending on the specific objective of the study, the climate dimensions were used either as independent or dependent variables. A separate mean score was computed at the classroom level for each of the two ethnic subgroups. (See the Appendix for a listing of the items included in each dimension.) Responses to the items that comprise the dimensions consist of the students' level of agreement with the statements. Student responses were coded as follows: strongly disagree = 1, mildly disagree = 2, mildly agree = 3, and strongly agree = 3. All 12 of the following dimensions were used in the analyses.

Teacher Affect. One of the two scales resulting from the second order analysis, Teacher Affect was intended to measure affective teacher behavior in the classroom. The dimension combined the Teacher Concern, Teacher Enthusiasm, Teacher Authoritarianism and Teacher Punitiveness scales. Sample items from this dimension are: "This teacher is

friendly", "This teacher seems to like being a teacher", and "This teacher treats us like children".

Instructional Practices. Instructional Practices is the second of the two combined dimensions. This dimension resulted from the combining of the Teacher Clarity, Knowledge of Results and Organization scales. This dimension permits the respondents to judge instructional aspects of the class. The dimension focuses on how clear the teacher is in giving instructions and feedback and on how well the class is organized. Sample items for this dimension are: "The teacher gives clear directions", "We know when we have learned things correctly", and "Things are well planned in this class".

Teacher Enthusiasm. The Teacher Enthusiasm items were used to determine to what degree teachers were seen as enjoying their work. "This teacher seems to like being a teacher" and "The teacher seems bored in this classroom" are samples of these items.

Peer Esteem. The focus of the Peer Esteem dimension is on the relationship among students. It was intended to measure whether or not the students in class were helpful and friendly to one another. Sample items are: "In this class, people care about me" and "If I had trouble with my work, most of my classmates would help me".

Student Decision-Making. Student freedom and ability to make independent decisions were meant to be measured by the Student Decision-Making items. Among these items are: "We are free to talk in this class about anything we want" and "Students help decide what we do in this class".

Classroom Dissonance. The Classroom Dissonance dimension sought students' perceptions about the degree of fighting and friction in class. "The students in this class fight with each other" and "Students in this class yell at each other" exemplify these items.

Student Competitiveness. The extent to which students perceive the classroom atmosphere as pitting student against student was measured by the Student Competitiveness scale. These items include: "In this class, students compete with each other for good grades" and "Students in this class feel they have to do better than each other".

Student Cliqueness. The Student Cliqueness scale was used to ascertain whether students mixed together in class or whether they worked in small closed groups. The students responded to statements like: "Some groups of students refuse to mix with the rest of the class" and "When we work in small groups, many students work only with their close friends".

Student Compliance. The Student Compliance dimension was designed to determine to what extent students in the class did their homework and the other things they were asked to do. Some of these items are: "The students in this class usually do the work assigned" and "I usually do everything my teacher tells me to".

Student Apathy. The Student Apathy scale is close to the reverse of the Student Compliance scale. The apathy scale was intended to ascertain the degree of student lack of interest and motivation in class. The students were asked to indicate their level of agreement to items like: "Failing in this class would not bother most of the students" and "I don't care about what goes on in this class".

Classroom Physical Appearance. As the name of the Classroom Physical Appearance scale suggests, this scale was intended to discover perceptions of the class's physical appearance. This was accomplished through reactions to the following items: "The room is bright and comfortable" and "I like the way this classroom looks".

Task Difficulty. Task Difficulty is a second dimension examining classroom instructional practices. In this case the dimension intends to determine whether or not classroom tasks are perceived as being too difficult. Examples of these items are: "Some of the things the teacher wants us to learn are just too hard" and "The teacher gives me too much work to do in this class".

Dependent Variables--Class Outcomes

Achievement. The teacher in each sampled class was asked to rate the achievement level of each student in the class. Referring to class records they were to indicate whether each student was above average, average, or below average in relation to the rest of the class. These ratings were then scored 1, 2, and 3, respectively, and aggregated by ethnic group at the classroom level. This resulted in subgroup achievement ratings for the two ethnic groups.

Attendance. The same procedure was used to obtain subgroup ratings for attendance.

Analysis

Since this study is primarily interested in looking for differences between two groups--Mexican-Americans and Anglos--a statistical technique adapted to differentiating between groups was required. To also assure that this differentiating be done on a class by class basis, an analysis of variance with a repeated measures factor was used. This design treats each class as a single unit, using the two within class subgroup scores as the repeated measures. This permits a comparison of the two subgroups. Conceptually, this is the same procedure one would use to look for differences in the same test given to the same individual

on two different occasions. With everything else assumed to be the same, it tests for differences in the repeated measures. In addition to determining the main effect of ethnicity, this technique permits testing for possible interactions between ethnicity and other variables thought to influence the dependent variables.

The portion of the study dealing with student attendance and achievement is concerned mainly with the effect of the climate scales on these outcome measures. An appropriate means of simultaneously dealing with the effect of several predictor variables on an outcome variable like achievement is multiple regression analysis. So, for the portions of the study relating climate scores to student outcomes, multiple regression analysis was used. In effect, multiple regression analysis operates by determining which linear, weighted combinations of variables (e.g. independent) best predict a given dependent variable. The weights for each independent variable introduced into the analysis on a given dependent variable indicates the relative strength and direction of the effect of each independent variable on a specific dependent variable. The effect of each independent variable is an effect in addition to that contributed by the other independent variables in the analysis. The analysis also indicates the strength of all of the independent variables combined on a given dependent variable. So, for these analysis, multiple regression will determine the independent and combined effect of the climate scales on student attendance and achievement.

FOOTNOTES

1. More information on A Study of Schooling can be found in a series of four articles published sequentially in the Phi Delta Kappan. The first of these (Goodlad, Sirotnik & Overman, 1979) describes the conceptualization, research design and types of data collected.

2. For more detailed information on the methodology, instrument development and data collection see Overman (1979) and Sirotnik (1979).

CHAPTER V

RESULTS

The Effect of Ethnicity on Climate Perceptions

In what follows, the results of the statistical analyses using data from Fairfield Junior High and Senior High schools are organized and presented in relation to the research objectives that guided this study. The first of these objectives was concerned with determining whether group differences between Mexican-Americans and Anglos could be found in relation to perceptions of classroom climate. Analysis of variance with a repeated measures factor (BMDP2V, Jennrich & Sampson, 1979) was used to test for subgroup differences in climate perceptions. This analysis compared the subgroups class by class for each of the 12 climate scales, while controlling for the effect of school level (junior high and high school) and subject (English, math, social studies, science and art).

This analysis uncovered relatively few main effects for race. At the .05 or better significance level there were main effects for race for three of the 12 climate scales. If the choice of significance level were relaxed to .10, three more of the scales would be significant. As to the first research objective, then, there appear to be differences between the two groups attributable to ethnicity but these differences reach statistical significance for only three of the 12 climate scales. There is no pervasive perceptual difference between the two groups.

The second research objective was concerned with the direction of the differences. The mean scores for the two ethnic groups on each of the 12 climate scales can be found in Table 2. As can be clearly seen in Table 2, of the three scales that display significant differences by ethnicity the Anglos score higher on two scales and the Mexican-Americans on one. All of these three are negative scales (a higher score indicates less favorable perceptions). Therefore, the Mexican-American subgroup has more favorable perceptions of the climate than the Anglo subgroup on two of three scales. If the three scales were included that were significant at the .10 level--Student Decision-Making, Classroom Dissonance, and Classroom Physical Appearance--the Mexican-American subgroup would have the more favorable perceptions for five of the six climate scales.

Therefore, Mexican-American and Anglo students taken as separate groups do differ significantly in their perceptions of classroom climate. But these data do not seem to support the prediction about the direction of the results that theory and observational studies seem to make. It appears that the Mexican-Americans do not have the less favorable perceptions of class climate.

The last portion of the first objective was concerned about which separate climate constructs were most influenced by ethnicity. Reference has already been made to the scales displaying differences between the two groups. The significance of the mean differences displayed in Table 2 is determined in reference to the F value found in the ANOVA tables resulting from the analysis of variance that was computed for the 12 dimensions. An example of a complete ANOVA table for the scale with the largest mean difference--Student Cliqueness--can be found in

Table 2

Mexican-American and Anglo Subgroup

Means for Climate Scales (N = 38)

Climate Scales	Subgroups: Anglo X	Anglo SD	Mexican-American X	Mexican-American SD
Teacher Affect	3.05	0.34	3.04	0.31
Instructional Practice	2.88	0.40	2.88	0.34
Teacher Favoritism	2.56	0.42	2.35	0.36**
Peer Esteem	2.96	0.24	2.92	0.26
Student Decision-Making	2.12	0.33	2.19	0.26
Classroom Dissonance	2.38	0.42	2.31	0.38
Student Competitiveness	2.45	0.31	2.43	0.28
Student Cliqueness	2.93	0.26	2.70	0.26**
Student Compliance	3.05	0.35	2.99	0.32
Student Apathy	2.24	0.43	2.19	0.41
Classroom Physical Appearance	2.39	0.48	2.53	0.38
Task Difficulty	2.16	0.30	2.29	0.28*

* $p < .05$
** $p < .01$

Table 3. This table is exemplary of the design used throughout this portion of the study to test for subgroup differences. Only the results of the within-group analyses pertain to the comparison of the two subgroups, so only the within-group portion of the analyses will be reported for the subsequent scales displaying significant results. While the existence of significant level differences might be interesting in its own right, it is not within the scope of this study.

The results of the within-group portion of the analysis of variance reported in Table 3 demonstrate that for the Student Cliqueness scale and F value of the main effect of race is 20.84. This value is significant beyond the .001 level, indicating that the possibility of the difference in ethnic mean scores having occurred by chance is extremely remote. The ANOVA table also demonstrates that there was no interaction effect for this scale. In other words, the significant differences in the subgroups' perceptions of Student Cliqueness are consistent over level (junior high and high school), and subject (English, math, social studies, science and art) and are not influenced by level and subject interacting.

It will be remembered that the subgroup means found in Table 2 show that the Anglo subgroup had the highest score for Student Cliqueness. And, the effect of ethnicity on Student Cliqueness persists when other crucial variables are controlled for. Thus, it can be safely concluded that students of the Anglo subgroup see more Student Cliqueness in their classes than do the Mexican-Americans. To review, this scale is characterized by items like: "Some groups of students refuse to mix with the rest of the class" and "When we work in small groups, many students work only with their close friends".

Table 3

Results of ANOVA Testing the Main

Effect of Ethnicity on Student Cliqueness

Source	df	Mean Square	F
Between			
Level (L)	1	0.351	4.66*
Subject (S)	4	0.126	1.67
L x S	4	0.047	0.63
Error (B)	28	0.075	-
Within			
Ethnicity (E)	1	1.069	20.84**
E x L	1	0.032	0.63
E x S	4	0.016	0.31
E x L x S	4	0.049	0.96
Error (w)	28	0.051	-

*p <.05

**p <.001

The climate scale with the next largest mean difference for ethnicity was Teacher Favoritism. The within portion of the ANOVA table for this scale can be found in Table 4. The main effect for ethnicity has an F value of 10.94 which is significant at the .01 level or better. The mean differences reported in Table 2 demonstrate that the Anglo subgroup had a higher score on this scale, too. Students of the Anglo subgroup, therefore, perceive more Teacher Favoritism in those classes than do the Mexican-Americans. This scale is characterized by items like the following: "The teacher likes some students in this class better than others" and "The teacher has no favorites in this class".

The third scale with a significant main effect for ethnicity reflects ethnic group differences in perceptions of Task Difficulty. Table 5 reports the within-group portion of this analysis. The F value for the main effect is 7.08 which is significant at the .01 level. The means recorded in Table 2 demonstrate that in contrast to the other two scales with significant ethnic subgroup differences, the Mexican-American subgroup scores higher on the Task Difficulty scale. Thus, Mexican-American students perceive these classes to be more difficult than do the Anglo students. The Task Difficulty scale contains items like: "Some of the things the teacher wants us to learn are just too hard" and "The teacher gives me too much to do in this class".

The analysis of variance, then, discovered ethnic group differences between Mexican-American and Anglo within-class subgroups. These differences indicated that the Mexican-Americans had more favorable perceptions of classroom climate than did the Anglos. Of the three climate scales displaying main effects for ethnicity, the Mexican-Americans had the more favorable perceptions of Student Cliqueness and

Table 4

Results of ANOVA Testing the Main

Effect of Ethnicity on Teacher Favoritism

Source	df	Mean Square	F
Within			
Ethaicity (E)	1	0.778	10.94*
E x Level (L)	1	0.075	1.06
E x Subject (S)	4	0.085	1.20
E x L x S	4	0.056	0.79
Error (w)	28	0.071	-

*$p < .01$

Table 5

Results of ANOVA Testing the Main

Effect of Ethnicity on Task Difficulty

Source	df	Mean Square	F
Within			
Ethnicity (E)	1	0.390	7.08*
E x Level (L)	1	0.071	1.31
E x Subject (S)	4	0.027	0.49
E x L x S	4	0.075	0.27
Error (w)	28	0.055	-

*p <.01

Teacher Favoritism, and the least favorable perceptions of Task Difficulty. In addition, the analysis of variance demonstrated that the differences by ethnic subgroup did not interact with school level or classroom subject matter. The effect of school level and subject failed to reach a significance level of .05 for any of the 12 climate scales.

Two other variables often controlled for should also be mentioned--student sex and socio-economic status. Student sex was equally distributed throughout the two ethnic groups and reasonably well balanced within the sampled classrooms. Therefore, sex was not confounded with ethnicity and there was no need to further control for the variable.

The student socio-economic status (SES) variable was much more difficult to deal with in this study. A Study of Schooling was not permitted to gather information on SES from the student sample. The study sought to remedy this situation by obtaining estimates of SES from the parents of the sampled students which in turn would be matched to the sons and daughters of these parents. SES data were collected from parents and matched with students by the study, but the parental response rate was rather uneven. Only 20 to 22 percent of the parents at Fairfield Junior and Senior High Schools returned the parent questionnaire. When matched to the appropriate students in the sample used for this study, there were too few cases to make a valid class by class comparison using the SES variable. Therefore, it was not possible to include SES in these analyses. It should be pointed out, however, that a study (Engstrom, 1981) comparing SES and climate scores at the individual level over all the parent-student match-ups from the Study of Schooling data found little relationship between student SES and student climate scores.

The Effect of Climate on Attendance and Achievement

The second objective of this study dealt with the relationship between climate scores, ethnicity and class attendance and achievement. Evidence reported in Chapter II linked climate scores with attendance and achievement. Evidence was also presented that demonstrated a wide disparity between the scores on these variables for Mexican-Americans and Anglos. To fully understand whether the educational setting or climate has a differential impact on ethnic subgroups, it seems necessary to examine the relationship between climate and class attendance and achievement.

Before beginning to examine the relationship among climate, ethnicity and attendance and achievement it was decided to examine this sample of classes to see if there were ethnic differences in these variables. Since analysis of variance is an appropriate test of mean differences it was used again to test for differences between subgroup means for attendance and achievement. Ethnicity was again used as a repeated measures factor so the comparison of means would be made on a class by class basis. The results of this analysis indicated that there were significant differences between the ethnic subgroups on both attendance ($F = 4.08$, $p < .05$) and achievement ($F = 27.71$, $p < .000$). The scores for mean attendance were 2.27 for Anglos and 2.14 for Mexican-Americans. For achievement the means were 2.24 for Anglos and 1.85 for Mexican-Americans. (For both variables 1 = below average, 2 = average, and 3 = above average.) Anglos scored higher on both variables--the difference in achievement being especially noteworthy. Thus, this sample of students is consistent with other comparisons of Mexican-American and Anglo students in finding ethnic differences in class outcomes.

The more interesting question, which is what the second objective focused on, is whether perceptions of class climate relate to these outcomes and if so are the relationships of equal importance for both subgroups. Multiple regression analysis (SPSS Subprogram Regression, Nie, et al., 1975) was the primary analytic tool used to investigate the relationship of climate scores to attendance and achievement. The twelve climate scales were used to predict attendance and achievement separately. Using the 12 climate scales to predict attendance for the Anglo subgroup yields a multiple correlation of .45 ($F = .62$, N.S.) between the climate scales and attendance. (The multiple R is a statistical representation of the strength of the relationship between the combined set of independent variables and the dependent variable.) The relationship between climate and attendance is not statistically significant for the Anglo subgroup and it accounts for a relatively modest 20 percent of the variance between climate and attendance. We see, then, that the relationship between climate perceptions and attendance is minimal for the Anglo subgroup.

The same analysis for the Mexican-American subgroup yields a considerably different result. For the Mexican-Americans there is a multiple correlation of .71 ($F = 2.43$, $p < .05$) between climate perceptions and attendance. This relationship is statistically significant and it accounts for 50 percent of the shared variance between the set of climate scales and attendance. On the basis of this analysis it can be concluded that for the Mexican-American subgroup, perceptions of what goes on in the classroom appear to be associated with class attendance.

The other class outcome that was examined in relationship to climate perceptions was student achievement. The multiple regression

analysis computed between achievement and the climate scales resulted in a multiple correlation of .58 ($F = 1.38$, N.S.) for the Anglo subgroup. The relationship between climate perceptions and achievement appears to be stronger for the Anglo subgroup than does the relationship between climate and attendance. The relationship between the set of climate scales and achievement accounts for 34 percent of their shared variance. For the sample size used in this study, however, the relationship does not reach statistical significance.

Just as with student attendance, there is more of a relationship between climate perception and achievement for the Mexican-American subgroup. The multiple correlation between this subgroup's perceptions of the climate and their achievement is .69 ($F = 2.21$, $p < .05$). This represents 48 percent of the shared variance and is statistically significant. Thus, the perceptions that the Mexican-American subgroup has about the classroom context relates in a relatively strong fashion to the subgroup's class achievement.

To summarize the results of the analyses relating to the second objective of this study, when climate perceptions were related to attendance and achievement, it was found that there was a weak and non-significant relationship between these variables for the Anglo student subgroup. While climate perceptions appear to correlate with attendance and achievement for the Anglo subgroups, the influence was not large enough to rule out the possibility of it being attributable to chance. The sample size for these subgroup analyses was rather small and it is likely that, if the sample size were larger, there would be a significant relationship between climate and achievement for this subgroup.

In contrast, there is no need for equivocating about these same relationships for the Mexican-American subgroup. The relationship between this subgroup's perceptions of class climate and both attendance and achievement was statistically significant. In both cases the set of climate scales account for about 50 percent of the variance in the class outcomes.

To conclude, there appears to be relatively modest relationship between climate perceptions and attendance and achievement for the Anglo subgroup. The relationship is much stronger, however, for the Mexican-Americans. For the Mexican-American subgroup, the way the classroom environment is perceived appears to be strongly related to attendance and achievement.

The final portion of both objectives dealt with the multidimensionality of the climate instrument. It was concerned with which of the dimensions contributed most to explaining differences in subgroup perceptions of class climate and which contributed most to explaining the relationship between class climate and attendance and achievement. The degree to which the ethnic subgroups differed in their perceptions of the separate climate dimensions has already been discussed. The question that remains pertains to which of the separate climate dimensions does the most to account for whatever relationship obtains between climate perceptions and attendance and achievement.

As well as supplying a measure of the overall relationship between a set of predictor variables and a dependent variable, multiple regression analysis also permits interpretations to be made about which variables contribute most to the overall relationship. Statistics are supplied as part of this program that specify what proportion of the

total multiple R and R-square each additional variable supplies to the relationship and the amount of change in the R-square that each additional variable makes. These statistics are all in reference to the order in which the variables are entered into the analysis. Two other statistics that can be helpful in making conclusions about the relative strength of the separate variables are given--the simple correlations between each predictor variable and the dependent variable and beta coefficients for each independent variable. (The beta coefficients are regression coefficients that are adjusted or standardized so they are comparable.) Since the order in which the variables are entered into the analysis affects the summary statistics for the separate variables and since there was no reason to select any climate scale over any others as being more important in predicting the dependent variables, the stepwise option, was chosen for the regression analysis. With this option the order in which each variable is entered into the regression is determined by the program on the basis of which variable accounts for the most additional variance, taking into account the variables that have already been entered. The analysis, then, ranks the variables in order of importance taking into account the effect of the preceding variables.

To return to the results of these analyses, in spite of the relatively weak relationship between the climate scales on one hand and the student outcomes on the other when using the Anglo sample, it is still worth examining which of the climate scales contribute most to the relationship that obtains. At the very least these results can be compared to the results from the Mexican-American subsample.

The weakest of the relationships was between the climate scales and Anglo class attendance. The results of the analysis examining this relationship can be found in Table 6. It is clear that the Student Apathy scale contributes most to the modest relationship with Anglo class attendance. The relationship, naturally is negative--indicating that classes the Anglos see as containing apathetic students are less well attended by the Anglos. (By way of warning, it is not possible to establish causation for this relationship or any other relationship reported in this chapter because causality cannot be determined on the basis of correlational analyses.) Since the simple r is so low for the next variable it appears to be a suppressant variable (see McNemar, 1969) and cannot be thought of as a reliable predictor of attendance. The third variable, Task Difficulty, also has a negative relationship to attendance. This suggests that the more difficult the class is perceived as being by the Anglo subgroup, the less Anglo attendance. The remaining variables add little to the overall strength of the relationship between the climate variables and attendance.

The results of the analysis of the relationship between Anglo climate scores and Anglo achievement can be seen in Table 7. It appears that two of the climate dimensions contribute most to this relationship. They both contribute more or less equally to the modest amount of variance explained between climate and Anglo achievement. The first of these, Student Cliqueness, has a positive relationship to achievement and the second, Student Apathy, has a negative one. It is to be expected that classes that the Anglo subgroup perceived as containing apathetic students would also have lower achievement. But, it is rather puzzling that classes seen as containing cliquish

Table 6

Results of Multiple Regression Analysis of Climate Perceptions and Attendance for the Anglo Subgroup

(Multiple R = .45, R-Square = .20, F = .62)
(N = 42)

	Summary Table for Stepwise Procedure				
Variables	Multiple R	R-Square	R-Square Change	Simple r	Beta
Student Apathy	23	06	06	-25	-47
Teacher Affect	33	11	05	02	-42
Task Difficulty	36	13	02	-19	-21
Student Compliance	38	14	01	11	-34
Instructional Practices	39	16	01	14	41
Student Decision-Making	41	17	01	-11	-18
Classroom Dissonance	43	18	02	-02	32
Student Cliqueness	44	20	02	-13	-14
Student Competitiveness	45	20	00	13	-09
Peer Esteem	45	20	00	11	06
Classroom Physical Appearance	45	20	00	11	05
Teacher Favoritism	45	20	00	-07	-04

Decimal points have been omitted.

Table 7

Results of Multiple Regression Analysis of Climate Perceptions and Achievement for the Anglo Subgroup

(Multiple R = .58, R-Square = .34, F = 1.38)
(N = 42)

	Summary Table for Stepwise Procedure				
Variables*	Multiple R	R-Square	R-Square Change	Simple r	Beta
Student Cliqueness	33	11	11	33	39
Student Apathy	46	22	11	-24	-53
Peer Esteem	50	25	04	04	-16
Task Difficulty	54	30	04	-27	-18
Classroom Dissonance	55	31	01	16	22
Teacher Favoritism	56	32	01	-17	-16
Student Decision-Making	58	33	01	04	-10
Student Competitiveness	58	33	00	13	-11
Teacher Affect	58	33	00	18	-16
Instructional Practices	58	34	00	31	12
Student Compliance	58	34	00	32	-06
Classroom Physical Appearance	58	34	00	05	07

Decimal points have been omitted.

students would have higher achievement. In fact, of the 12 climate scales, Student Cliqueness has the highest simple correlation with Anglo achievement. Of course considering the size and lack of significance of this relationship, it may be due to chance. As to the influence of the other dimension, the remaining climate scales contribute relatively little to Anglo achievement beyond that accounted for by Student Cliqueness and Student Apathy.

The relationship between the separate climate dimensions and Mexican-American attendance and achievement is of more importance because there is a considerably stronger relationship between climate and class outcomes for this subgroup. To review, the regression analysis found a multiple R of .70 between the Mexican-American subgroup's perceptions of class climate and their classroom attendance. The results of this analysis are recorded in Table 8. This table demonstrates that a single climate dimension accounts for nearly half of the variance that climate and attendance have in common. This variable is Teacher Affect. Teacher Affect is a composite of the Teacher Concern, Teacher Enthusiasm, Teacher Authoritarianism, and Teacher Punitiveness scales. Not surprisingly, there is a positive relationship between the Mexican-American subgroup's perceptions of Teacher Affect and Mexican-American attendance. The more the subgroup perceives classes to be high in Teacher Affect the higher the attendance.

Two other variables explain a moderate amount of the variance between climate and attendance for the Mexican-American subgroup. The first of these is Peer Esteem. This represents another positive relationship. The more the Mexican-American subgroup sees the classes as containing students who like and help one another the higher the subgroup attendance.

Table 8

Results of Multiple Regression Analysis of Climate Perceptions and Attendance for the Mexican-American Subgroup

(Multiple R = .71, R-Square - .50, F = 2.43*)
(N = 42)

	Summary Table for Stepwise Procedure				
Variable	Multiple R	R-Square	R-Square Change	Simple r	Beta
Teacher Affect	48	23	23	48	99
Peer Esteem	56	31	08	47	49
Classroom Dissonance	65	42	11	-15	45
Classroom Physical Appearance	66	44	02	21	-11
Student Compliance	67	45	01	28	-09
Student Competitiveness	68	46	01	19	28
Instructional Practices	69	47	01	42	-39
Teacher Favoritism	69	48	01	-36	-14
Student Apathy	70	49	01	-37	20
Task Difficulty	70	49	00	-28	-17
Student Cliqueness	71	50	01	15	10
Student Decision-Making	71	50	00	21	-05

Decimal points have been omitted.

*p < .05

The other variable that adds a reasonable amount to the shared variance for the Mexican-American subgroup in Classroom Dissonance. Again, there is a positive relationship indicated between Classroom Dissonance and attendance. This is puzzling, however, since Classroom Dissonance has a negative simple correlation ($r = -.15$) with attendance. The scale also has negative simple correlations with Teacher Affect ($r = -.72$) and Peer Esteem ($r = -.42$), the other variables that are most strongly and positively related to attendance. There does not appear to be a substantive explanation for the positive beta coefficient for the Classroom Dissonance scale. It must be a statistical artifact representing the intercorrelations among the set of climate variables. Regardless of the explanation, the variables beyond these three add little more to the variance that the climate scales and attendance have in common.

The results from the analysis of the final relationship to be examined--the relationship between the Mexican-American subgroup's perceptions of class climate and the same subgroup's class achievement--can be found in Table 9. The contributions of the various climate dimensions resemble the results of the analysis of Mexican-American attendance. Here again, a single climate dimension accounts for a large portion of the variance that the climte and achievement scores have in common. The Instructional Practices scale alone is responsible for more than half of the 48 percent shared variance. The relationship is positive--indicating that the more the Mexican-American subgroup perceives the classes as being well organized and clear in instruction and purpose the higher the subgroup's class achievement.

Table 9

Results of Multiple Regression Analysis of Climate Perceptions and Achievement for the Mexican-American Subgroup

(Multiple R = .69, R-Square = .48, F = 2.2*)
(N = 42)

	Summary Table for Stepwise Procedure				
Variable	Multiple R	R-Square	R-Square Change	Simple r	Beta
Instructional Practices	53	28	28	53	37
Student Cliqueness	61	37	09	30	21
Classroom Physical Appearance	64	41	03	07	-29
Task Difficulty	65	42	02	-30	-16
Classroom Dissonance	66	44	02	-04	39
Student Apathy	68	46	02	-36	-23
Teacher Affect	69	47	01	37	25
Student Compliance	69	47	00	47	12
Teacher Favoritism	69	48	00	-20	09
Peer Esteem	69	48	00	27	04
Student Competitiveness	69	48	00	31	-04
Student Decision-Making	69	48	00	24	-02

Decimal points have been omitted.

*$p < .05$

A second scale, Student Cliqueness, accounts for a moderate amount of the shared variance even though it accounts for less than a third as much as the Instructional Practices scale. Just as with Anglo achievement, the relationship between Student Cliqueness and achievement is positive. The remaining climate variables add a relatively small amount to variance explained.

In summary, the examination of the effect of the separate climate scales on attendance and achievement was able to identify smaller sets of scales that seemed to explain most of the variance between climate and these variables. Since there was relatively little variance in common between the Anglo subgroup's climate perceptions and their attendance and achievement, the scales identified accounted for considerably less variance than in the other subgroup analysis. Perhaps the most obvious finding from the Anglo portion of the analysis is that Student Apathy appears to be the scale most associated with class attendance and achievement.

For the Mexican-American subgroup analysis, single climate scales explained large portions of shared variance for both attendance and achievement. Teacher Affect was the most important climate scale in explaining attendance. For Mexican-American achievement, it was the Instructional Practices scale that was by far the most important predictor variable.

CHAPTER VI

SUMMARY, DISCUSSION, AND IMPLICATIONS

Summary of the Study

The Research Problem. In spite of considerably more access to the public schools and in spite of a more understanding attitude on the part of those teaching in and administrating these schools, the results of schooling for members of the Mexican-American minority have not greatly changed. After reviewing the history of Mexican-American education, Carter and Segura conclude:

> The socioeconomic plight of the Mexican-American group continues relatively unchanged; Mexican-American school achievement and attainment remain in the same position relative to other groups. Some of the older discriminating patterns, policies, and practices of the schools have been modified, but few have been eliminated or radically changed. (1979, p. 28)

This disparity between the Mexican-American and middle-class Anglo educational outcomes has been well documented, the potential explanations have been posited and their implications researched. But, even with the large amount of attention given to this problem, there does not appear to be a convincing explanation for the Mexican-Americans' lack of school success.

A relatively new perspective taken toward this lack of success suggests that it is the context of schooling or the school environment that is accountable for the Mexican-American minority's lack of success. As reported earlier, Carter and Seguara (1979) call this the structural

environmentalist perspective. This perspective focuses attention on the school instead of on the individual student. According to this perspective the structure or environment of the school accords differential treatment to minority and middle-class children. The present study was conceived within this context as another attempt to understand the dynamics contributing to the Mexican-American minority's relative inability to achieve in school as well as middle-class Anglos.

School and class environment in general have been the focus of a great deal of research in the recent past. Class climate measures in particular have been found to be sensitive to a wide range of variables (see Randhawa & Fu, 1973). It seemed reasonable if the structural and environmental characteristic of the classroom had differential impacts on minority and Anglo students that a classroom climate measure would be able to detect the differences. So, taking the position that the school or class should be the unit of study in trying to account for the differences between Mexican-American and Anglo school experiences, it was decided to examine the two groups' perceptions of life in the classroom. Other research investigating differences between Mexican-American and Anglo educational experiences has found differences in the quality and quantity of teacher-student interactions and has found some differences in climate perceptions. However, most of the studies comparing the ethnic groups' perceptions of climate have been done at the university level--sampling a population that is, no doubt, quite unlike the one found in the public schools. As to those studies undertaken in the public schools, they were either not designed, or not properly designed to examine perceptual differences between the two groups within the same classroom.

Procedures. Using data collected for a national research project, A Study of Schooling, this study compared perceptions of class climate from the perspective of Mexican-American and Anglo groups within the same classrooms. The comparison was made using data from a junior high and high school from the southwestern region of the U.S. In addition, the two groups' climate perceptions were related to teacher judgments of student attendance and achievement aggregated by ethnic group. The statistical techniques of analysis of variance and multiple regression analysis were used to make the comparisons and establish relationships.

Limitations. While classes within the two schools used in this study were selected at random within subject areas, the study was conducted at only these two schools. This study is exploratory and makes no pretense of generalizability beyond these two schools. On the other hand, it is hoped that insight can be gained from the findings of this study that may have heuristic relevance to Mexican-American education and that may guide further inquiry into this important area of research.

It should also be pointed out, that as well suited as this data base was for making classroom level comparisons of the two ethnic groups, potentially important information on the student sample was not available. Most importantly, there was no information by which recent or relatively recent immigrants into the United States could be differentiated from students born and reared in the United States. Nor, was any information available about individual Mexican-American's competence with the English language. While the students were offered the option of a translated survey questionnaire and none took this option, it can only be assumed that all of the students were able to accurately

read and respond to the questionnaire. However, the unit of analysis of this study minimizes these problems. Since the scores used in the analyses are aggregated by ethnic subgroup at the classroom level, the effect of an unreliable individual respondent is reduced.

Summary of Findings

Mexican-American and Anglo Perceptions of Class Climate. The first objective of this study was to determine whether the two ethnic groups differed in their assessment of the classroom environment, and if so, whether the Mexican-Americans perceived the climate less favorably than the Anglos. The frequent assertion that Mexican-American students are schooled in an environment alien to their cultural background and the fact that this minority does not have great success in school would lead one to expect that these students would see the school environment differently from the Anglos and that they would see it less favorably. Consistent with expectations, a significant difference was found between Mexican-American and Anglo perceptions of the classroom environment. The direction of these differences, however, was not consistent with expectations. The Mexican-American subgroup generally had more positive perceptions of the classroom environment than did the Anglo subgroup. This difference is most clear in an examination of the subgroup perceptions of the separate subscales. Significant differences between the two groups were found on three of the climate dimensions. They were Student Cliqueness, Teacher Favoritism, and Task Difficulty. All of these can be considered negative dimensions (e.g. the higher the score, the more negative the perception of the class) and the Anglo group had higher scores on two of the three dimensions. The Mexican-American

subgroup had a more negative perception of Task Difficulty, only. If the requirements for determining significance were relaxed somewhat, three more dimensions could be said to differentiate between the two subgroups--Student Decision-Making, Classroom Dissonance, and Class Physical Appearance. The Mexican-American subgroup saw each of these dimensions more favorably than the Anglo subgroup. Even though there were significant differences in the way the two groups saw their classroom environment, it appears that the Mexican-American subgroup reacted the most favorably to it.

Class Perceptions and Class Outcomes. The second objective of the study dealt with the relationship between subgroup class perceptions and attendance and achievement. Judgments about these variables were supplied by the teacher of each class. As such, class achievement reflects the course grades of the students instead of a score on an achievement test. Since members of the Mexican-American minority as a group do not do as well in school as middle class Anglos, it was anticipated that the same would be true for this sample. Also, since climate perceptions have been shown to relate to both cognitive and affective outcomes, examining the relationship between subgroup climate perceptions and attendance and achievement appeared to offer the possibility of better understanding group differences in these variables.

It was first necessary to confirm that there were subgroup attendance and achievement differences for this sample. And, as was expected there were significant group differences in both attendance and achievement. In both cases the difference was in favor of the Anglo students. The difference in achievement was especially pronounced.

There were three important parts to the investigation of the relationship between perceptions and attendance and achievement. First it was necessary to determine whether there was a relationship between these climate scores and attendance and achievement. Next, if there was a relationship, it would be important to see if the relationship was similar for the two subgroups. Since there were significant differences in class achievement between the two groups, it was of interest to see if climate perceptions explained a proportionate amount of the variance in achievement for both groups. The final part of the investigation pertained to the different contributions that the separate climate scales would make to explaining the relationship between climate and attendance and achievement.

As to the first two parts of the investigation, a relationship was found to obtain between climate perceptions and attendance and achievement, but the strength of the relationship differed considerably for the two subgroups. For the Anglo subgroup the relationship between climate and attendance and achievement was relatively small and was not statistically significant. Statistical significance is largely a function of the sample size and it is likely that had the sample size been larger the relationship between Anglo perceptions and achievement, at least, would have been significant.

The variable that contributed most to the small relationship was Student Apathy. It appeared as one of the top two variables predicting attendance and achievement even though the actual amount of variance it accounted for was relatively small. In both cases, where the Anglo subgroup judged a class to contain apathetic students, the Anglo subgroup attended class relatively less and received relatively lower

grades. Student Cliqueness also helped explain some of the variance in class achievement, but in this case the Anglo students did better in classes they perceived as containing more student cliquishness.

The relationship between Mexican-American perceptions of class climate and attendance and achievement was much stronger than the corresponding relationship for the Anglos. For both attendance and achievement, climate perceptions accounted for around half of the shared variance. The relationships between climate and attendance and climate and achievement were also statistically significant.

The investigation into which climate dimensions accounted for the relationship between perceptions and the two variables revealed that each time a single dimension accounted for the majority of the shared variance. It was the Teacher Affect scale that accounted for the majority of the variance in the Mexican-American subgroup's attendance. It makes sense substantively that classes perceived to be characterized by teacher warmth and enthusiasm and by an absence of authoritarianism and punitiveness would be the classes more attended by the Mexican-American subgroup.

The dimension explaining most of the relationship between the Mexican-American subgroup's perceptions of the class and class grades was Instructional Practices. This too makes sense. The classes the subgroup saw as being characterized by clarity and good organization were the classes in which this subgroup received higher grades.

To conclude, this study found significant differences in Mexican-American and Anglo perceptions of the classroom environment. However, relatively few of the climate dimensions contributed significantly to this discrimination between the two subgroups. More importantly, it

appears that while there was a significant difference in attendance and achievement between the ethnic subgroups, these variables were influenced by perceptions of the classroom environment to a much greater degree for the Mexican-American subgroup than for the Anglo subgroup. In addition, for the Anglo subgroup, it appears that student behavior (e.g. Student Apathy and Student Cliqueness) accounted for much of the small amount of shared variance between climate perceptions and attendance and achievement. But, for the Mexican-American subgroup it was the variables under the control of the teacher that did most to explain increased attendance and achievement. Teacher affect and control variables related to attendance and teacher instructional practices related to class grades.

Discussion

Most research into the comparative lack of school success experienced by members of the Mexican-American minority has sought to identify characteristics of the individual child or family to help explain the lack of success. This has been true of studies using the cultural deprivation theory to explain problems of minority education and it is often true of studies stemming from the cultural different perspective. In more recent years more and more people have shifted their focus from the individual student to the system in which the education takes place. Today a sizeable number of researchers and educators would explain the educational disparity between the Mexican-Americans and the Anglo middle-class in terms of the harmful affects of the school and class environment. Schools are regarded as non-adaptive. When students with cultural backgrounds quite different from the middle-class

Anglo background which is reflected by the school enter the system, they are thought to encounter an environment that restricts school success to a greater degree than for the Anglos.

The findings of this study tend to contradict this perspective. When secondary school Mexican-American and Anglo students were asked to agree or disagree to numerous questions characterizing their class environment, it was the Mexican-American subgroup that had the most positive perceptions when there were subgroup differences. For most of the climate dimensions, however, there was no significant difference between the groups. The two ethnic subgroups saw no significant difference in a number of constructs describing the teacher's relation to the students, student interaction, and certain classroom practices.

They did differ on three dimensions--Student Cliqueness, Teacher Favoritism, and Task Difficulty. The first of these--Student Cliqueness--can probably be considered a measure of ethnic group cliquishness. The items ask if students stuck together in groups and refused to mix in class. And, when classes contain a near balance of students from two ethnic groups it is likely the groups are formed on the basis of ethnicity. There is no way of knowing if this is the case based on these data, but it seems a reasonable assumption. If it is the case that Student Cliqueness reflects ethnic cliquishness then the Anglo subgroup's higher score on this scale would mean that they perceived more ethnic cliquishness.

The other scale showing significant subgroup differences that the Anglos scored higher on seems related to cliquishness. This scale--Teacher Favoritism--seeks to determine if the teacher has favorites in

class. If the classes were characterized by ethnic cliquishness, it would not be difficult to imagine the teachers being seen as favoring one group over another. In any case, these two scales--being two of the three differentiating between ethnic groups in ethnically mixed classes--would at least suggest that the subgroups were reacting to an ethnically mixed but incompletely integrated classroom situation.

The third dimension that differentiates between the two groups was Task Difficulty. It was the Mexican-American subgroup that scored highest on this scale. Indeed, it would be surprising if that were not the case, since members of this subgroup received significantly lower grades and, therefore, can be assumed to have had more difficulty in class.

The finding that the two subgroups differed significantly on so few dimensions and that the Mexican-American subgroup had more favorable perceptions of the environment on two of the three scales differentiating between the two subgroups is surprising in view of the common perspective (the perspective taken by this study) that schools are inhospitable to groups with non-Anglo-Saxon, non-middle-class cultural backgrounds. Nonetheless, there appears to be at least four possible explanations for the inconsistency between this perspective and the findings of this study.

First, the sampled schools might contain classes that are examples of environments receptive to both the minority and middle-class culture. Perhaps in these ethnically balanced schools the two cultures coexist in harmony. The data available to this study do not address this question directly. The data do indicate, however, that the Mexican-American minority has the same relative lack of school success at

Fairfield that is found in the larger population. So, regardless of the degree of cultural acceptance in these schools, they, nonetheless, are appropriate examples of schools in which ethnicity has a strong relationship to school success.

A second explanation for this study's failure to find ethnic group differences in climate perceptions that favor Anglo students could be the nature of the climate instrument. First of all, this instrument was not developed with any intention of making comparisons between ethnic groups. It was designed to measure characteristics of classes thought to be pertinent to students in the public schools, regardless of their ethnic background. But, it was developed by Anglos and no attempt was made to develop items specifically related to the cultural background of the Mexican-Americans. However, climate constructs similar to these are considered sufficiently general in that they are being in a number of cross-cultural settings (see Walberg, 1976).

Similarly, climate instruments may not be sensitive to differential environmental forces directed at within-class subgroups. It may be that the pertinent dimensions were not included in the instrument. Climate measures, however, have found subgroup differences based on sex in several studies. And, in this study the instrument detected differences for some of the climate scales. In addition, it would be more likely that the instrument was incorrectly focused or insensitive if the instrument contained low inference variables of the type used in observation instruments. These types of variables are very specific in the information sought and are subject to very little inference. The climate instrument, in contrast, contains high inference dimensions that purposefully ask for judgments rather than asking for a tally of

specific occurences. These high inference measures are considered by some to be especially valid means of detecting meaningful differences in educational programs precisely because they reflect quality instead of quantity (Anderson & Walberg, 1974). Thus, it is difficult to see how the variety of dimensions measured by the climate instrument used in this study would fail to detect the effect of the cultural incompatibility that often is supposed to obtain between the minority culture and culture of the school.

But, even if it is assumed that the climate instrument is adequately sensitive to subgroup differences and in this sample there simply were no substantial differences in the environment that favored the Anglos, there is still the evidence from the classroom based teacher-student interaction studies that point to differential treatment of these two subgroups. However, there have been relatively few of these studies, and their findings can be questioned. The most important of these studies, for example, the study conducted by the U. S. Commission on Civil Rights (Report 5, 1974), based its apparently alarming findings on very small frequencies of occurence. Contrasts of ethnic groups are made on the basis of comparisons as small as between .004 and .008 (see Jackson & Cosea, 1974). In addition to the statistical problems involved in analyzing data using such small frequencies there is the question of meaningfulness. Are events that occur with such low frequency likely to be meaningful in the students' perceptions of class. Tallies of discrete events may not be the most accurate method studying educational environments.

Another possible explanation for the failure of this study to find large differences in favor of the Anglos in subgroup perceptions of

class climate is that the schools may have managed to socialize the mirority students into accepting their relative lack of school success. A number of studies have found the existence of different standards used for judging the school work of different groups. (Espinoza, Fernandez & Dornbusch, 1979, Evans & Anderson, 1973; Fernandez, Espinoza & Dornbusch, 1978). It is suggested that the minority students overestimate their school success because teachers use warmth and praise to keep these students engaged in the classroom rather than giving them appropriate standards by which they could judge their actual school progress (Fernandez, et al., 1978). Teachers giving minority students more warmth and praise could certainly account for the Anglo subgroup perceiving significantly more Teacher Favoritism. But, on the other hand, there was no significant difference between the groups on the Teacher Affect scale--the scale intended to measure teacher warmth.

The finding that over a wide range of climate dimensions there were relatively few displaying ethnic subgroup differences and that the Mexican-American subgroup had the more favorable perceptions on the majority of these dimensions could also be explained by assuming that the findings validly measure the classroom climate of the Fairfield schools--that in spite of the subgroups obtaining significantly different results from their schooling, their differences are not attributable to any perceivable environmental press. If this is the case, this study offers empirical evidence that the school system is not an alien environment to the minority student, or if it is, it is no more alien than it is to Anglo students as well. It is apparently not possible to explain differences between Mexican-American and Anglo success in school on the basis of an alien school environment.

Findings of this study, however, do offer some illumination of the relationship between ethnicity and school success. It appears on the basis of findings reported earlier that there is little relationship between Anglo judgments of the class environment and Anglo attendance or course grades. The Anglo subgroup appears to do alright regardless of the class environment. The climate scale that was most important in explaining the small relationship found between climate and attendance and achievement was Student Apathy--a scale measuring student characteristics. The teacher and instructional practice constructs did not affect the class outcomes. Another scale relating to student characteristics--Student Cliqueness--also helped explain the relationship between climate and achievement, but curiously the more cliquish the classes were seen the higher the subgroup achievement. This same relationship helped explain a moderate amount of the variance between climate and achievement for the Mexican-American subgroup. But, in any case, the Anglo subgroup was little affected by variation in the climate constructs.

In contrast there appear to be important as well as significant relationships between Mexican-American climate perceptions and class outcomes. While differences in the school success of the two subgroups can not be explained in terms of the classes differentiating between them, there, nonetheless, appears to be a relationship among ethnicity, climate, and success in class. It appears that the ethnic subgroups are affected by the same environment in different ways. For the Anglo subgroup, climate has little affect on success, but for the Mexican-American subgroup the climate appears to have a substantial affect.

The relationship with Mexican-American judgments of the class environment helped explain around 50 percent of the subgroup's attendance

and class grades. Interestingly, it was the Teacher Affect scale--the scale measuring teacher warmth, enthusiasm, lack of punitiveness, etc.--that explained most of the variance in school attendance. And, in contrast, it was the Instructional Practices scale--the scale measuring teacher clarity, classroom organization and purposefulness, etc.--that explained most of the variance in class grades. These results make sense logically and they are encouraging since they offer evidence that teacher affect encourages attendance and that better instructional practices lead to better course grades. This later finding might relate to evidence that minority students appear to benefit more than whites from better teachers (Walberg & Bargen, 1974).

Of course in studies of this type the question of causality can not be conclusively answered. Also, it should be reiterated that the ratings of school success come from teacher estimates instead of more objective measures of subgroup achievement. It could be argued, of course, that teachers would give higher course grades to students more favorable to the environment of the class. But again, this argument makes less sense in thinking of subgroups within class. In addition, if the teacher were giving higher class grades to students who had more favorable perceptions of the environment, the relationship with course grades should also be apparent in the affective scales. For example, classes with less punitiveness and less dissonance should be receiving the higher grades.

Implications

Certainly, exploratory studies of this type can raise more questions than they answer. An important question raised by the findings of

this study is whether the results are generalizable to Mexican-American schooling in general. While the implications of this study are important, they need to be replicated in other contexts using other samples. Since this study used a sample of secondary students, it would also be of interest to see whether similar results could be obtained with a sample of elementary students. Nevertheless, the results of this study raise serious questions about an assumption that undergirds much of the current rhetoric and practice relating to improving Mexican-American success in school--the assumption that the public schools represent an environment that is alien and, therefore, harmful to the minority student and that improvement in Mexican-American school success can be made by making the school environment more compatible with the minority student's cultural background. It certainly could be argued that changing schools to be more reflective of the Mexican-American culture is an admirable goal in its own right. But, findings from this study indicate that the minority students do not find school any more inhospitable than do the Anglo students. In fact, compared to the Anglos, the Mexican-American students have more favorable perceptions of life in the classroom. This challenge to the assumption of incompatibilities runs parallel to an evaluative study questioning the effect of a large scale program based on this assumption (Cervantes & Bernal, 1977). If members of the Mexican-American minority do not view the schools less favorably than the Anglos, it would appear that efforts aimed at making the environment more hospitable would not likely reduce the gap between Mexican-American and Anglo students.

If, as these findings suggest, incompatibility with the school environment does not help account for the relative school failure of the Mexican-American student, there is still confusion about what can

be done to improve the results of schooling for members of this minority. While this study did not find differences in class perceptions favoring the Anglo students, it did find relationships between perceptions of the classroom environment and attendance and achievement that suggest ways to improve schooling for the Mexican-Americans. Though there was little relationship between climate perceptions and these two variables for the Anglo subgroup, there was considerable relationship between climate perceptions and attendance and achievement for the Mexican-American subgroup. Teacher affective variables related to the Mexican-American subgroup's attendance and teacher instructional practices related to the subgroup's achievement. Thus, the within class processes of schooling seemed to have more of an impact on the Mexican-American subgroup. The implications of this finding is clear: improvements in the classroom characteristics identified by this study should lead to increased attendance and achievement for the Mexican-Americans.

This finding is encouraging becasue it suggests that variables over which the school has some firm control can make a real difference in educating members of this minority. This study's focus of the classroom as the unit of inquiry circumvented the problem of making the individual minority child the unit of change--a problem associated with much of the literature discussing the schooling of the Mexican-Americans. Even though it would be of some real interest to discover why climate perceptions relate more to attendance and grades for Mexican-Americans than for Anglos, as far as the educational implications are concerned, this is a moot question. If variables over which the school has control are found--as in this study--that promise to improve minority schooling, it is imperative to focus efforts on these variables in an

attempt to improve minority schooling regardless of the precise origin of the differences between Mexican-American and Anglo students. In other words, while this study did not find substantial differences between the two ethnic groups in their perceptions of life in the classroom, it did find differences in the way classroom processes affect the attendance and class grades of these two groups--differences that imply some basic difference between the background or learning styles of the two groups. But, in spite of the implication of subgroup differences, manipulable classroom variables relate to these differences and the focus of change can be the classroom itself.

Though some of the variables that appear to be important are affective and some are instructional, both types are clearly under the control of the teacher. This implies that efforts to improve attendance and achievement of the Mexican-American minority can be focused on efforts to improve teaching. It may be unfortunate to have another study suggesting that teachers be the unit of change; however, this study does not suggest the need for teachers to acquire unusual skills, or skills only related to minority students. It suggests instead that teacher characteristics valued in any teaching situation are those that are important--teacher warmth, enthusiasm, lack of punitiveness, clarity, organization, etc. The study suggests that these characteristics are more important for the minority student than for the Anglo, but education in general would profit from increased teaching skill.

In addition to implying that Mexican-American students will benefit if teachers improve their pedagogical skills, the study also has implications concerning school systems. If school systems are serious about improving Mexican-American attendance and achievement, efforts

must be made to improve the quality of teaching these students receive. Teachers assigned to minority schools should be the best available. It appears middle-class Anglo students could do without the best with much less harm than the minority students. Better teachers should be encouraged to go to these schools not through granting them negatively connotative "combat pay"--although better pay for superior skills does make sense--but through increased understanding that skillful teaching has the greatest impact on the minority student. If this relationship between teacher skill and minority success could be confirmed and better understood, minority education could potentially become more rewarding than teaching where skill has less impact.

While the apparent relationship between better pedagogy and increased Mexican-American attendance and achievement seems to offer the potential for improving the school success of this minority group, the recognition that the allocation of skillful teachers and other changes necessary to improve classroom pedagogy are political and economic in nature could lessen this potential. If, as LaBelle argues, it is the implicit goals of public education to "persuade or compel subgroup members to adapt to the cultural and structural interest of one or more of society's dominant groups and to . . . limit the dominant group's own need for altering the status quo" (1978, p. 43), then the discovery of manipulable variables will not be enough to improve Mexican-American education. However, if means of improving minority education are discovered and substantiated, but not implemented, at least the source of problems facing minority students will be better understood.

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APPENDIX

CLASSROOM LEARNING ENVIRONMENT SCALES

SECONDARY STUDENTS

Teacher Concern (8)

1. The teacher makes this class enjoyable for me.
4. The teacher listens to me.
13. The teacher lets me express my feelings.
14. I like the teacher in this class.
-17. I wish I had a different teacher for this class.
21. I feel the teacher is honest with me.
22. This teacher is friendly.
24. The teacher is fair to me.

Teacher Punitiveness (6)

2. The teacher makes fun of some students.
6. This teacher hurts my feelings.
7. I'm afraid of this teacher.
9. The teacher punishes me unfairly.
11. The teacher makes fun of me.
16. The teacher gets mad when I ask a question.

Teacher Authoritarianism (8)

19. This teacher is too strict.
45. This teacher treats us like children.
49. This teacher will never admit when he/she is wrong.
56. We don't feel like we have any freedom in this class.
64. This teacher acts like he/she is better than we are.
69. This teacher "talks down" to us.
75. This teacher never changes his/her mind about anything.
82. I don't feel like I have any freedom in this class.

Teacher Favoritism (3)

47. The teacher likes some students in this class better than others.
-50. The teacher has no favorites in this class.
77. The teacher treats smart students in this class better than others.

Teacher Enthusiasm (3)

38. This teacher seems to like being a teacher.
51. This teacher seems to enjoy what he/she is teaching.
-60. The teacher seems bored in this classroom.

Peer Esteem (7)

3. I help my classmates with their work.
8. If I am absent, my classmates help me to catch up on what I missed.
10. I like my classmates.
12. I like working with other students in this class.
15. In this class, people care about me.
18. If I had trouble with my work, most of my classmates would help me.
20. My classmates like me.

Student Decision-Making (8)

32. We are free to talk in this class about anything we want.
35. Students help make the rules for this class.
37. We are free to work with anyone we want to in this class.
40. We can decide what we want to learn in this class.
74. Students help decide what we do in this class.
80. Different students can do different things in this class.
91. Sometimes I can study or do things I am interested in even if they are different from what other students are studying or doing.
97. I help decide what I do in this class.

Classroom Dissonance (3)

41. The students in this class fight with each other.
54. The students in this class argue with each other.
107. Students in this class yell at each other.

Student Competitiveness (4)

48. There is a lot of competition in this class.
65. In this class, students compete with each other for good grades.
86. When I'm in this class, I feel I have to do better than other students.
90. Students in this class feel they have to do better than each other.

Student Cliqueness (3)

36. Some groups of students refuse to mix with the rest of the class.
68. Certain students stick together in small groups.
105. When we work in small groups, many students work only with their close friends.

Teacher Clarity (4)

62. The teacher uses words I can understand.
63. The teacher gives clear directions.
95. The students understand what the teacher is talking about.
109. I understand what the teacher is talking about.

Student Satisfaction (4)

96. Students feel good about what happens in class.
-101. I don't like coming to this class.
108. After class, I usually have a sense of satisfaction.
112. I feel good about what happens in this class.

Student Compliance (4)

53. I usually do my homework.
87. I usually do the work assigned in this class.
94. The students in this class usually do the work assigned.
104. I usually do everything my teacher tells me to do.

Student Apathy (4)

29. Failing in this class would not bother most of the students.
-33. Most of the students pay attention to the teacher.
34. Students don't care about what goes on in this class.
67. I don't care about what goes on in this class.

Classroom Physical Appearance (2)

70. The room is bright and comfortable.
111. I like the way this classroom looks.

Instructional Practices: Knowledge of Results (4)

30. The teacher tells us how to correct the mistakes in our work.
42. The teacher tells me how to correct the mistakes in my work.
43. This teacher lets us know when we have not learned something well.
61. We know when we have learned things correctly.

Instructional Practices: Task Difficulty (4)

44. I do not have enough time to do my work for this class.
66. Some of the things the teacher wants us to learn are just too hard.
73. I have trouble reading the books and other materials in this class.
92. The teacher gives me too much work to do in this class.

Instructional Practices: Organization (11)

28. We know exactly what we have to get done in this class.
52. We know why the things we are learning in this class are important.
57. The grades or marks I get in this class help me to learn better.
-58. We don't know what the teacher is trying to get us to learn in this class.
-72. Many students don't know what they're supposed to be doing during class.
-76. This class is disorganized.
-78. The grades or marks I get in this class have nothing to do with what I really know.
-79. We have to learn things without knowing why.
93. Students know the goals of this class.
106. Things are well planned in this class.
113. Our teacher gives us good reasons for learning in this class.